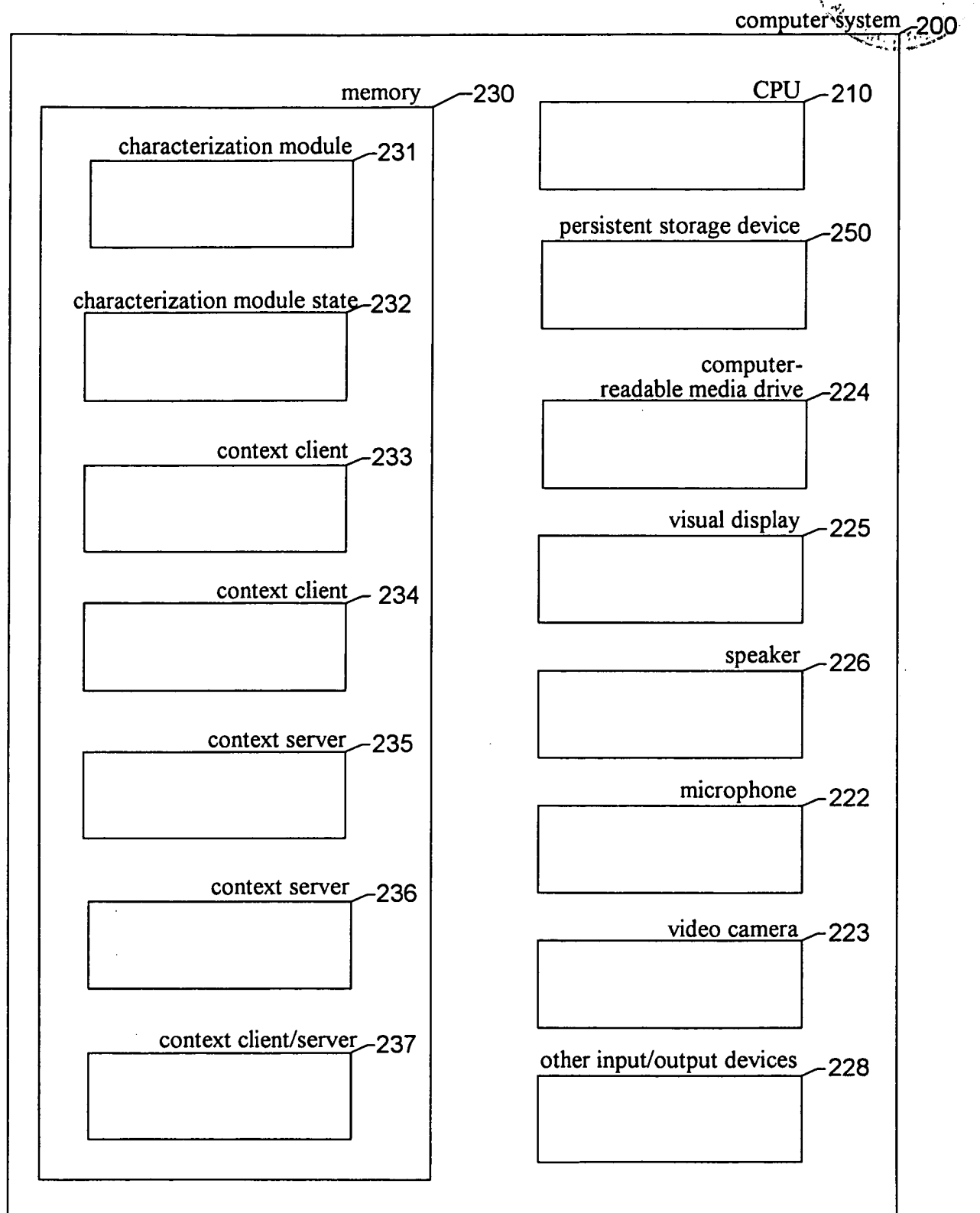


Fig. 1

FIG. 2



*Fig. 2*

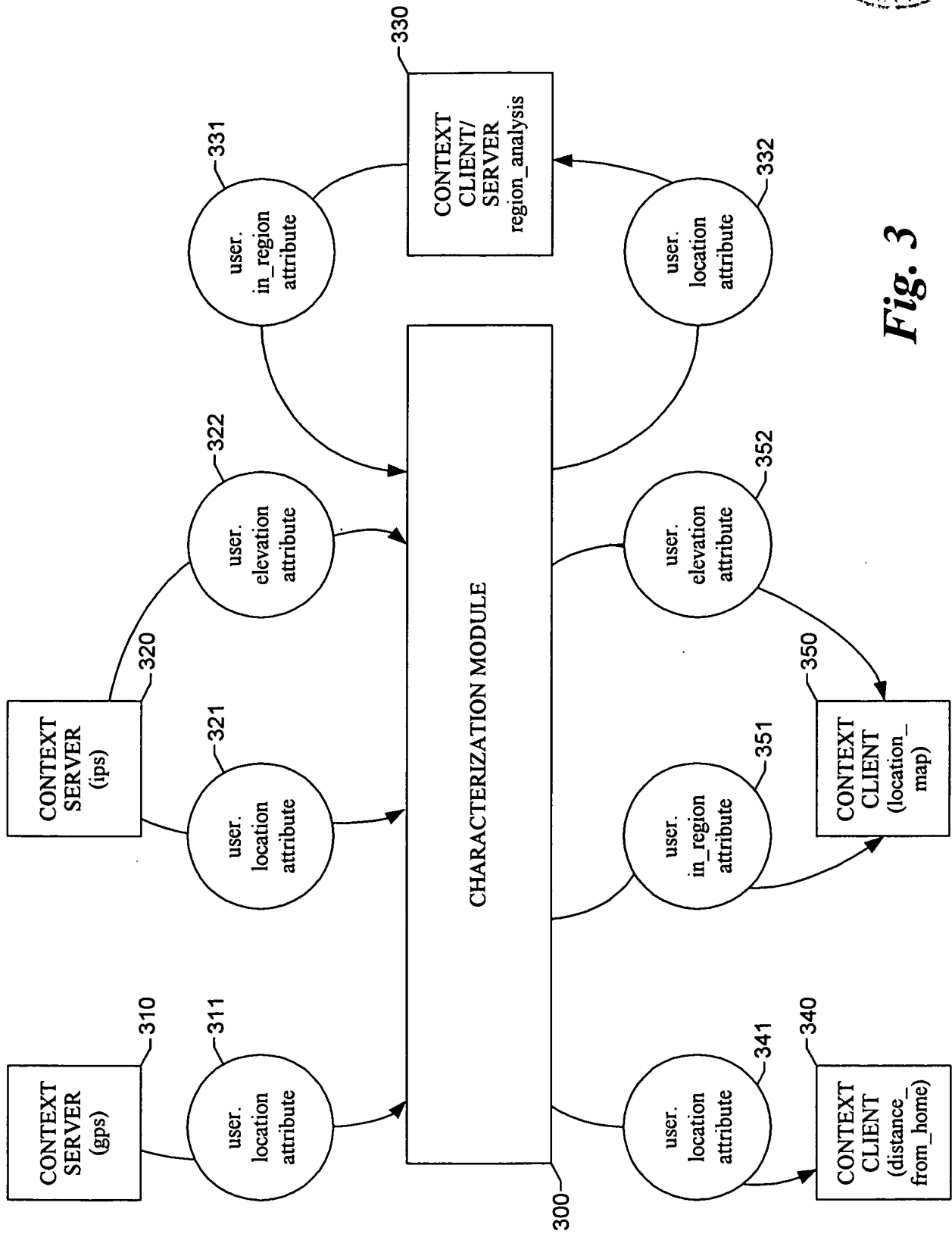


Fig. 3



context server table 400					
context server name	version	installation date	filename	request handler	
401 gps	1	2/10/2000	gps.exe	(reference)	415
402 ips	1	2/21/2000	ips.exe	(reference)	
403 location_region_analysis	1	2/10/2000	l_r_a.exe	(reference)	

Fig. 4

attribute instance table 500						
attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
501 user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
502 user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
503 user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters	1
504 user.in_region	location_region_analysis	none	none	none	none	0

Fig. 5



600	context client name	message handler	context client table
601	location_map	(reference)	
602	distance_from_home	(reference)	
603	region_analysis	(reference)	

612

611

Fig. 6

700	attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
701	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
702	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
703	user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters	1
704	user.in_region	location_region_analysis	none	none	none	none	1

711

712

713

714

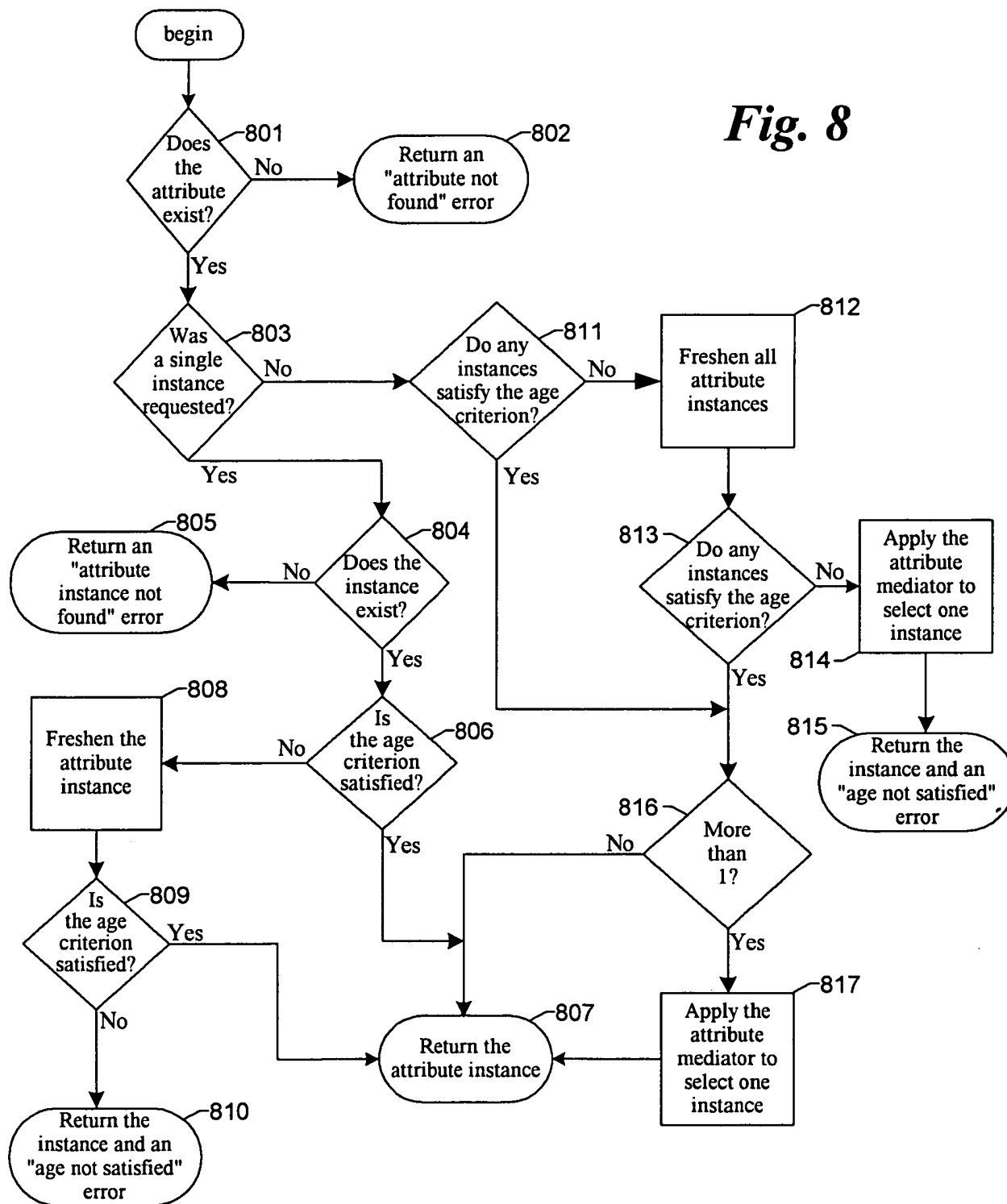
715

716

717

Fig. 7

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900	attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
901	user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
902	user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
903	user.elevation	ips	22.25	.5	13:11:06.565 2/22/2000	meters	1
904	user.in_region	region_analysis	none	none	none	none	1
		912	913	914	915	916	917

Fig. 9

1000	condition name	context client name	first logical parameter	second logical parameter	comparison value	logical operator
1001	in_region_true	region_analysis	user.in_region	none	TRUE	=
	1011	1012	1013	1014	1015	1016

Fig. 10



1100	condition monitor name	region_boundary_ crossed	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
1101		region_analysis	in_region_true	TRUE or FALSE	30	13:11:29.101 2/22/2000	(reference)	no	

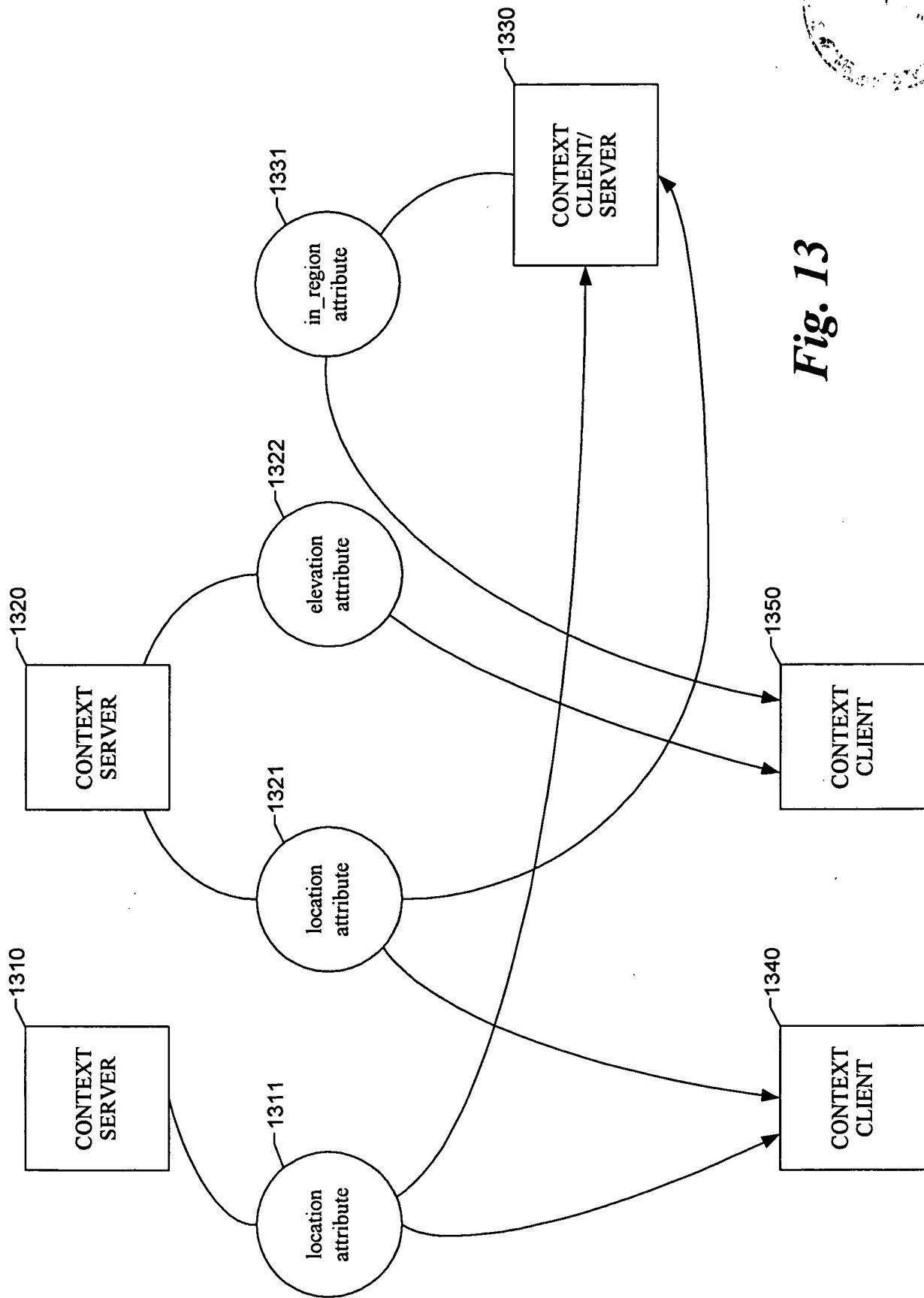
Fig. 11

1200	condition monitor name	region_boundary_ crossed	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
1201		region_analysis	in_region_true	TRUE or FALSE	30	13:11:59.101 2/22/2000	(reference)	yes	

Fig. 12

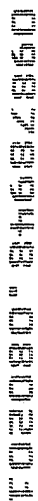






*Fig. 13*





**Fig. 14**

**User.**

Desired\_privacy\_level  
 Interruptibility  
 Speed  
 Direction  
 Acceleration  
 Availability.  
   Cognitive\_availability  
   Tactile\_availability  
   Manual\_availability  
   Visual\_availability  
   Oral\_availability  
   Auditory\_availability  
 Proximity.<Item or place name>  
 Mood.  
   Happiness  
   Sadness  
   Anger  
   Frustration  
   Confusion  
 Activity.  
   Driving  
   Eating  
   Running  
   Sleeping  
   Talking  
   Typing  
   Walking  
 Location.  
   Place\_name  
   Latitude  
   Longitude  
   Altitude  
   Room  
   Floor  
   Building  
   Address  
   Street  
   City  
   County  
   State  
   Country  
   Postal\_Code  
 Destination. (same as User.Location.)  
 Physiology.  
   Pulse  
   Body\_temperature  
   Blood\_pressure  
   Respiration

**Person.**<name or ID>. (same as User.)

**Platform.****UI.**

Oral\_input\_device\_availability  
 Manual\_input\_device\_availability  
 Tactile\_output\_device\_availability  
 Visual\_output\_device\_availability  
 Auditory\_output\_device\_availability

**Platform.** (continued)

CPU.  
   Load  
   Speed  
 Memory.  
   Total\_capacity  
   Used  
 Storage.  
   Total\_capacity  
   Used  
 Connectivity.  
   Connection\_status  
   Connection\_speed  
   Connection\_type/device  
   Connection\_activity  
 Power.  
   Power\_source  
   Power\_level

**Environment.**

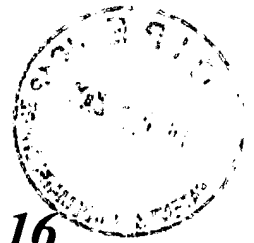
People.  
   Nearest  
   Number\_present  
   Number\_close  
 Local.  
   Time  
   Date  
   Temperature  
   Pressure  
   Wind\_speed  
   Wind\_direction  
   Absolute\_humidity  
   High\_forecast\_temperature  
   Low\_forecast\_temperature  
   People\_present  
   Ambient\_noise\_level  
   Ambient\_light\_level  
   Days.<previous or future>.  
     High\_temperature  
     Low\_temperature  
     Precipitation\_type  
     Precipitation\_amount

Place.<place name>. (same as Environment.Local)

**Application.**

Mail.  
   Available  
   New\_messages\_waiting  
   Messages\_waiting\_to\_be\_sent  
 Phone.  
   Available  
   In\_use  
   On/off  
   Notification\_mechanism  
   Call\_incoming  
   Caller\_ID  
 Sound\_recorder.  
   Available  
   Recording

**Fig. 15**



**Fig. 16**

- 1) User Setting
  - a) Mental Context
    - i) Meaning
    - ii) Cognition
      - (1) Divided User Attention
      - (2) Task Switching
      - (3) Background Awareness
    - iii) Solitude
    - iv) Privacy
      - (1) Desired Privacy
      - (2) Perceived Privacy
    - v) Social Context
    - vi) Affect
  - b) Physical Situation
    - i) Body
      - (1) Biometrics
      - (2) Posture
      - (3) Motion
      - (4) Physical Encumbrment
        - (a) Senses
          - (i) Eyes
          - (ii) Ears
          - (iii) Tactile
          - (iv) Hands
          - (v) Nose
          - (vi) Tongue
        - (b) Workload demands/effects
        - (c) Interaction with computer devices
        - (d) Interaction with people
        - (e) Physical Health
    - ii) Environment
      - (1) Time/Space
      - (2) Objects
      - (3) Persons
        - (a) Audience/Privacy Availability
          - (i) Scope of Disclosure
          - (ii) Hardware affinity for privacy
          - (iii) Privacy Indicator for User
          - (iv) Privacy Indicator for Public
          - (v) Watching Indicator
          - (vi) Being Observed Indicator
    - (4) Ambient Interference
      - (a) Visual
      - (b) Audio
      - (c) Tactile
- 2) Computer
  - a) Power
  - b) Configuration
    - i) User Input Systems
      - (1) Hand/Haptic
        - (a) Keyboard/Keystrokes
      - (2) Voice/Audio
      - (3) Eye Tracking
      - (4) Cursors
        - (a) Axis
        - (b) Resolution
          - (i) Selection
          - (ii) Invocation
        - (c) Accelerators
    - ii) Output Systems
      - (1) Visual
        - (a) Resolution
      - (2) Audio
        - (a) Public/Private
      - (3) Haptic
    - iii) External Resources
      - (1) I/O devices
      - (2) Connectivity
  - c) Data
    - i) Quantity/State
    - ii) Urgency/Importance
      - (1) Use of Prominence
    - iii) Modality
    - iv) Sensitivity/Purpose
      - (1) Privacy Issues
      - (2) Use of Association
      - (3) Use of Safety
    - v) Source/Ownership
      - (1) Types
        - (a) User generated
        - (b) Other computers or people
        - (c) Sensor
        - (d) PC State
      - (2) Use of Association

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Fig. 17

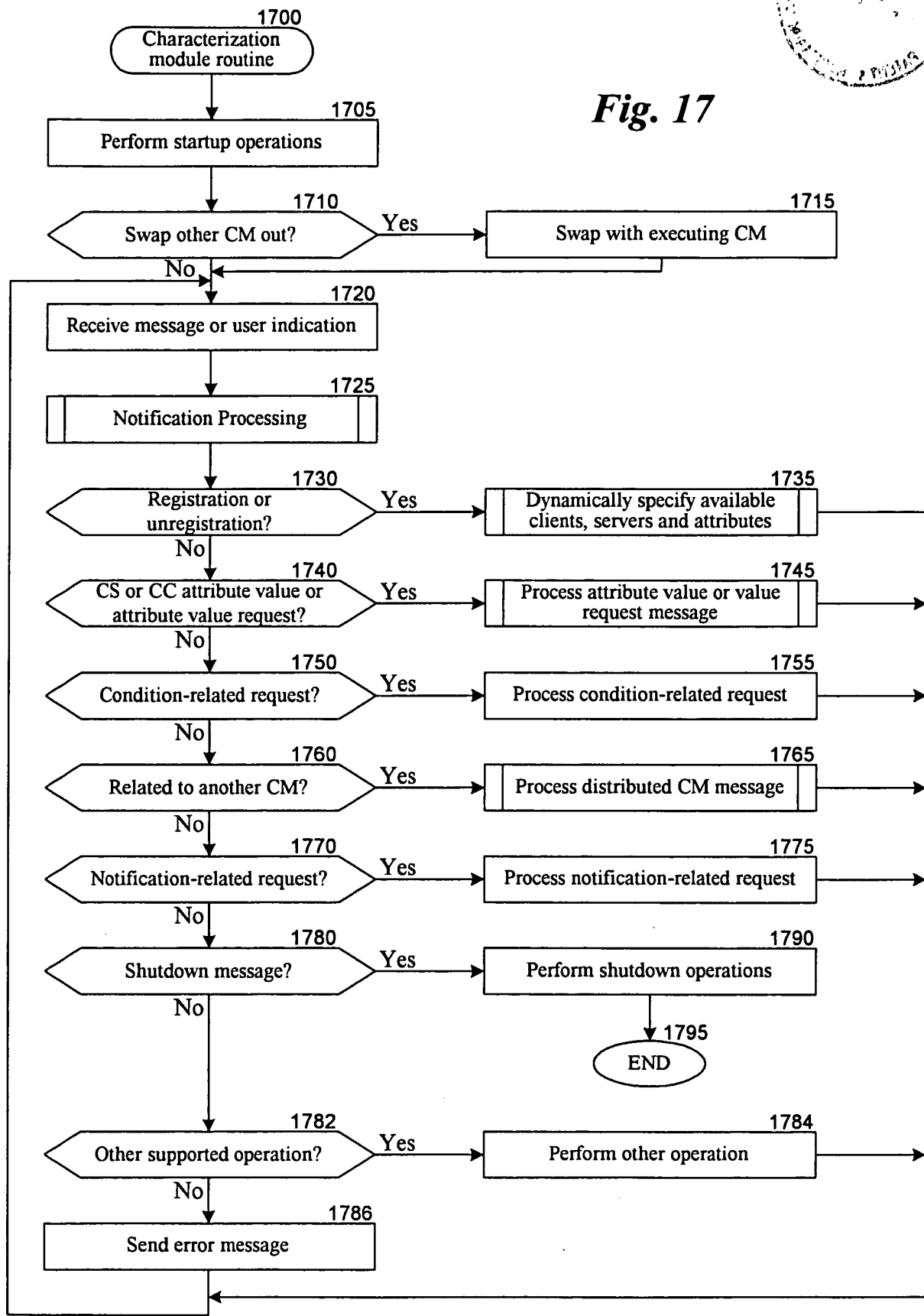
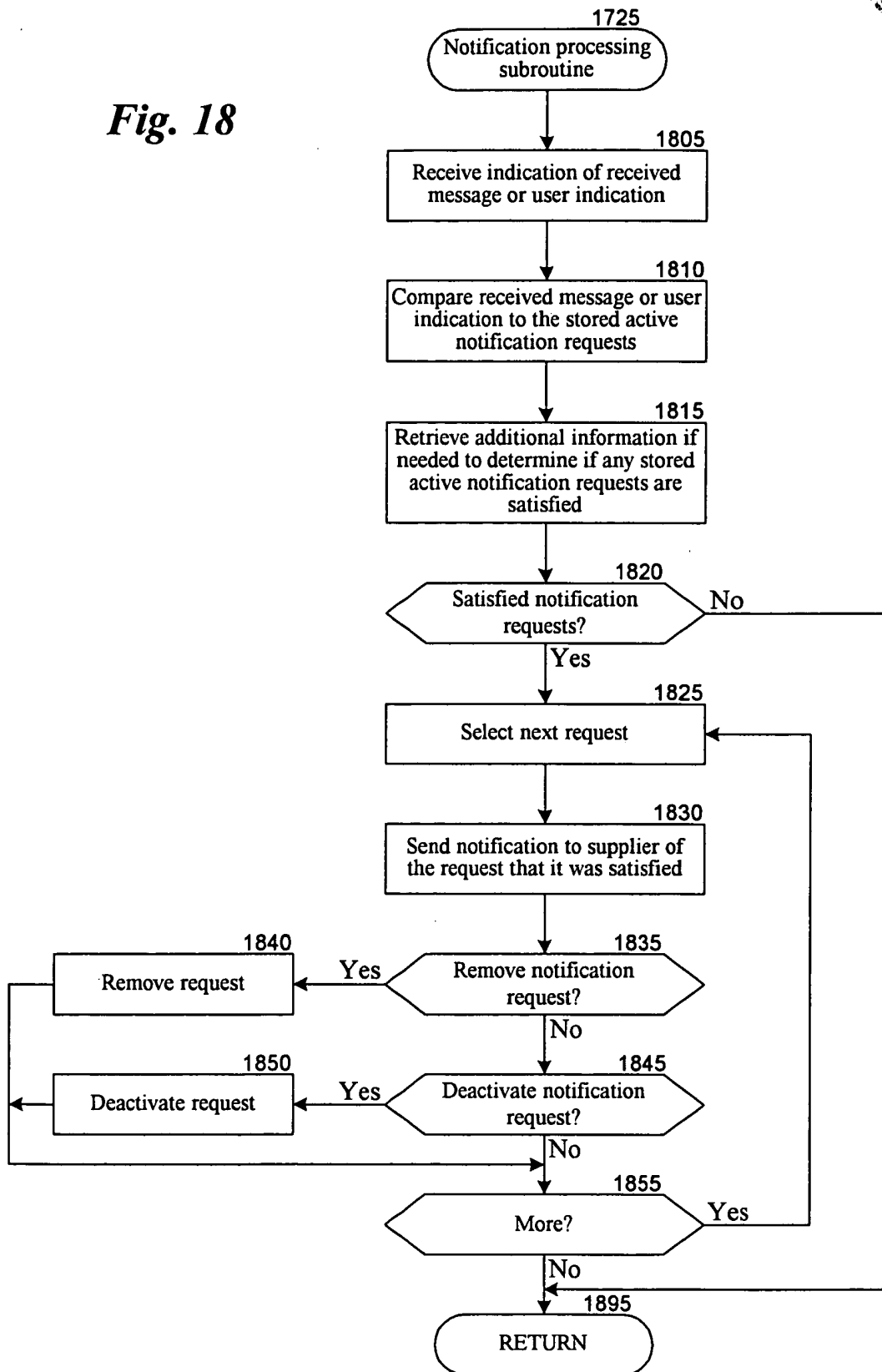
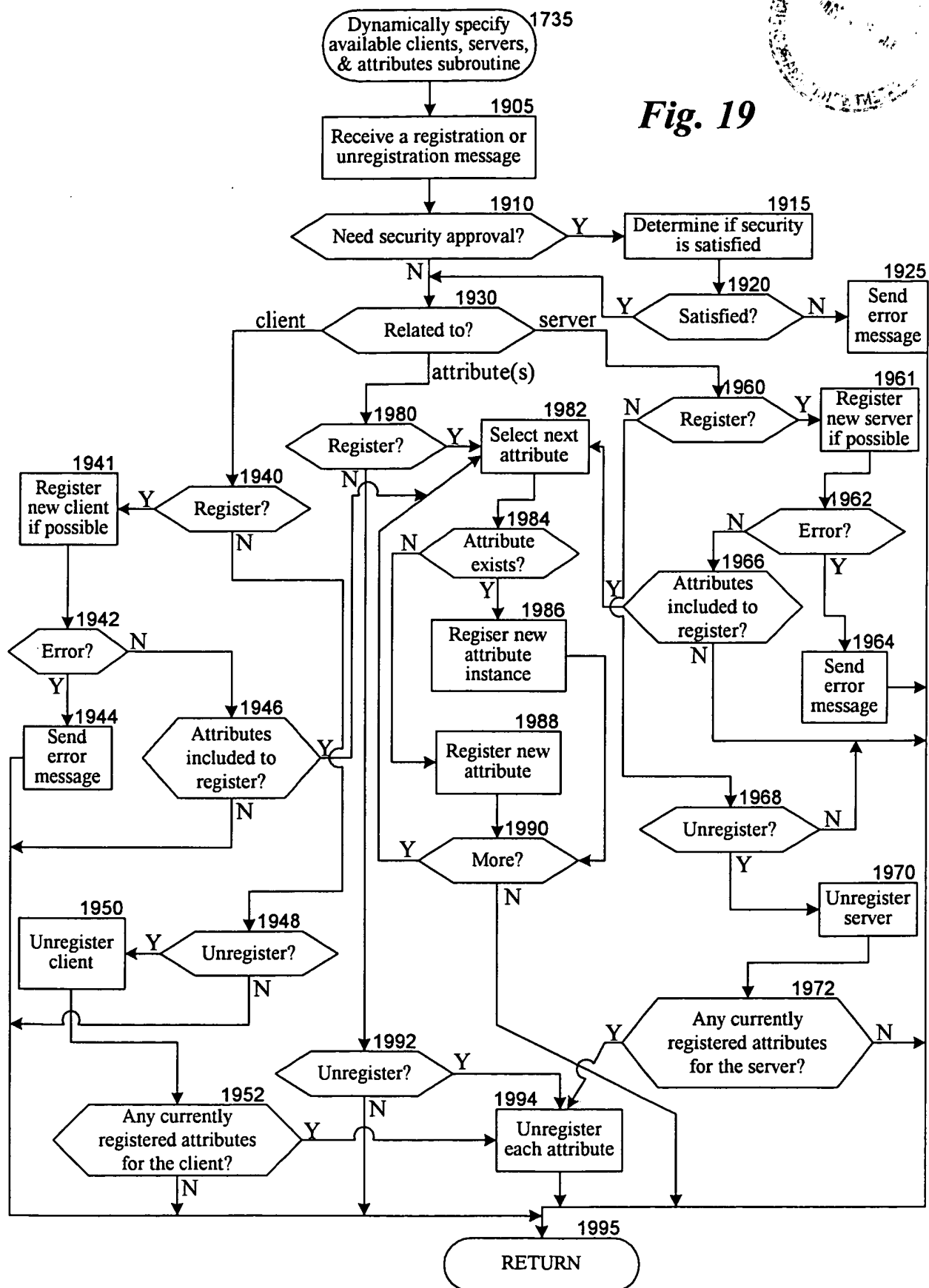


FIG. 17

**Fig. 18**





**Fig. 19**

Fig. 20A

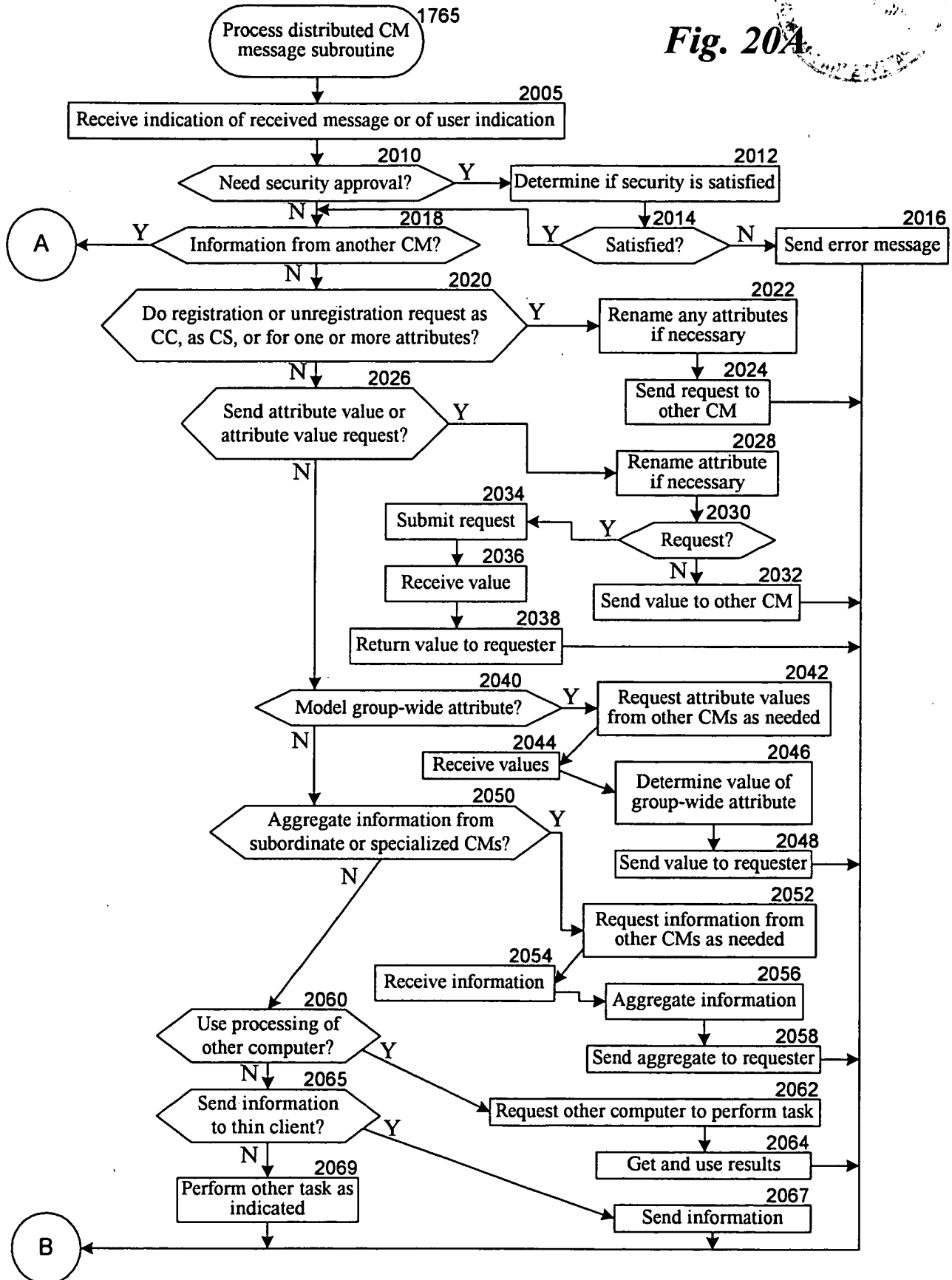






Fig. 20B

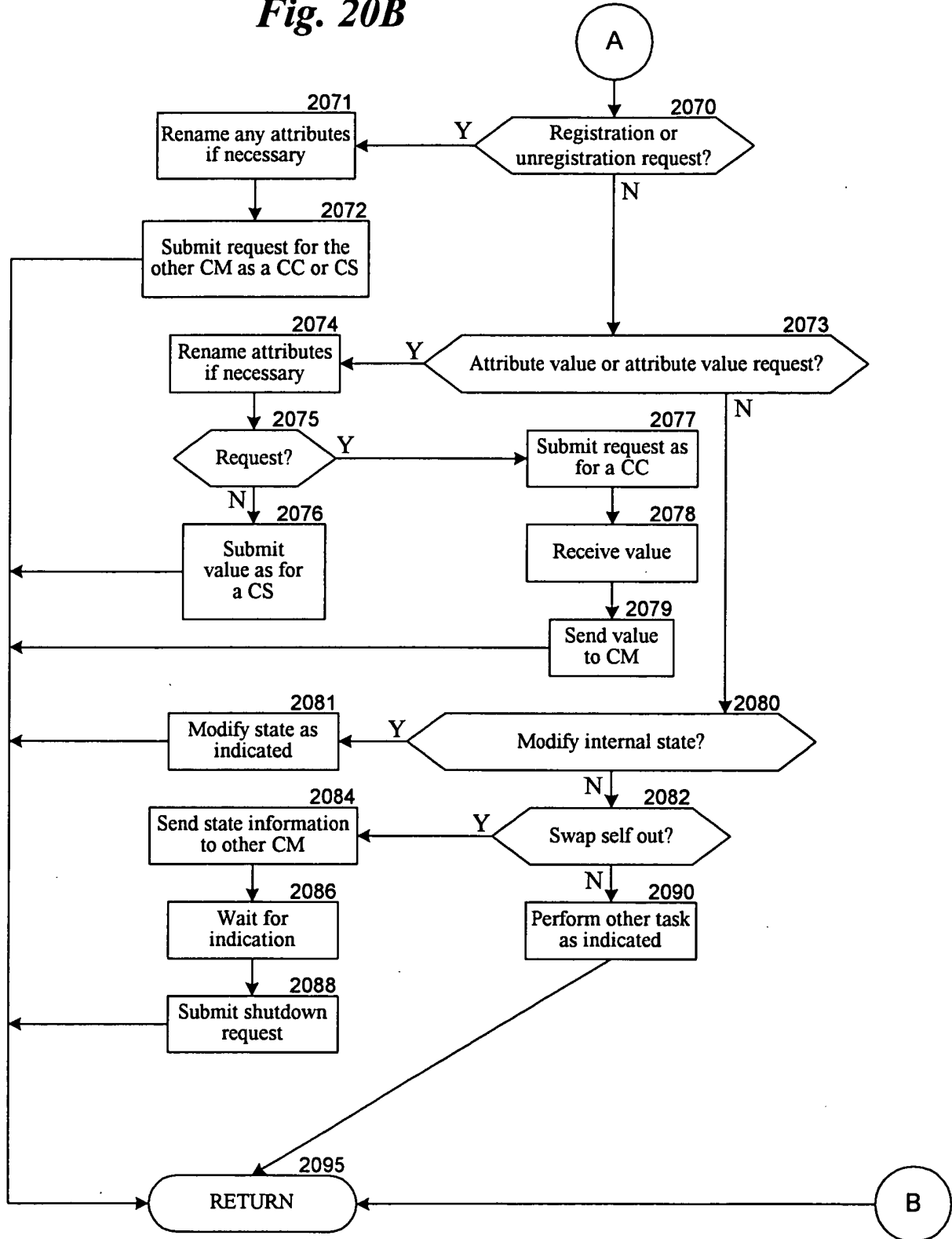
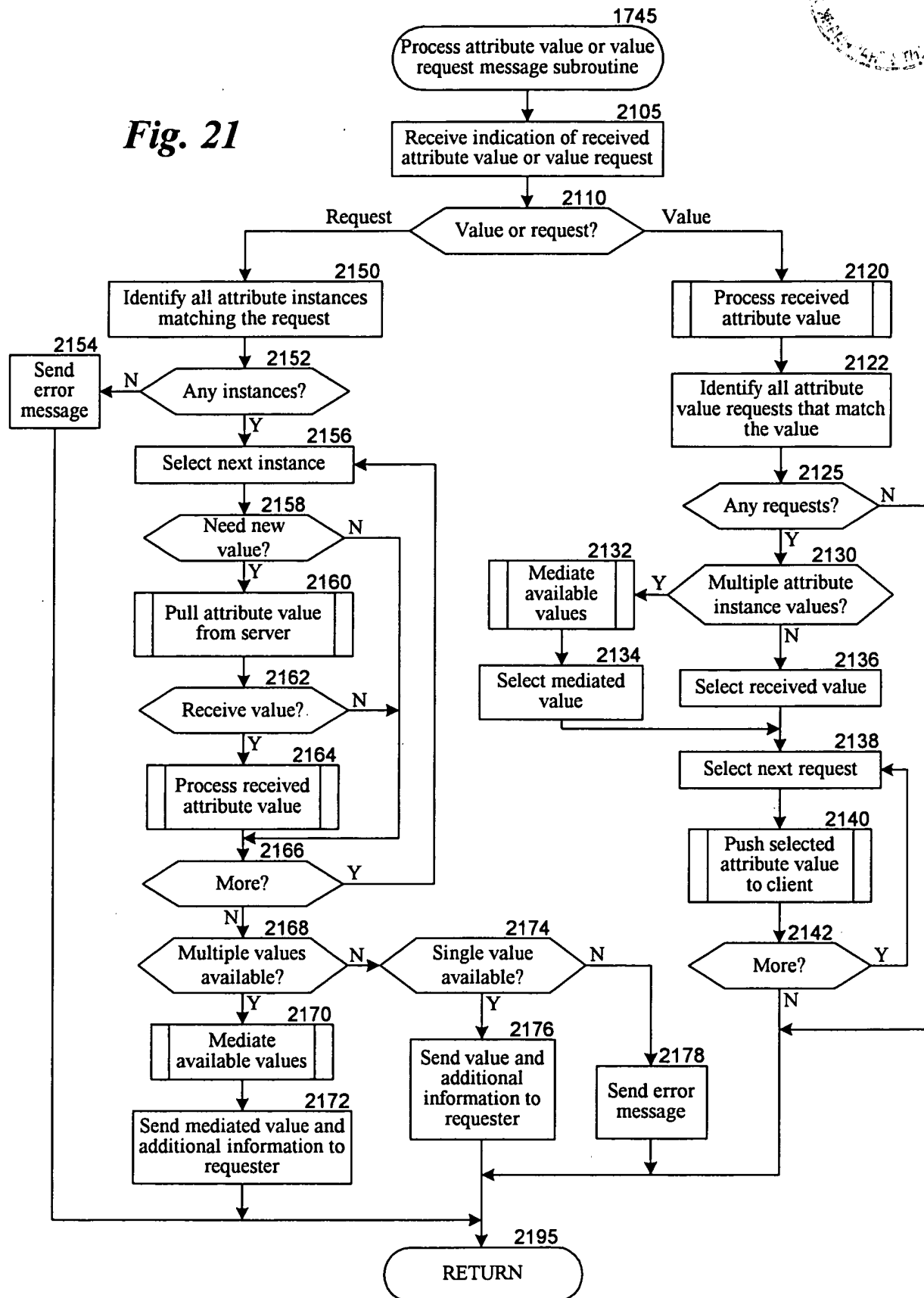
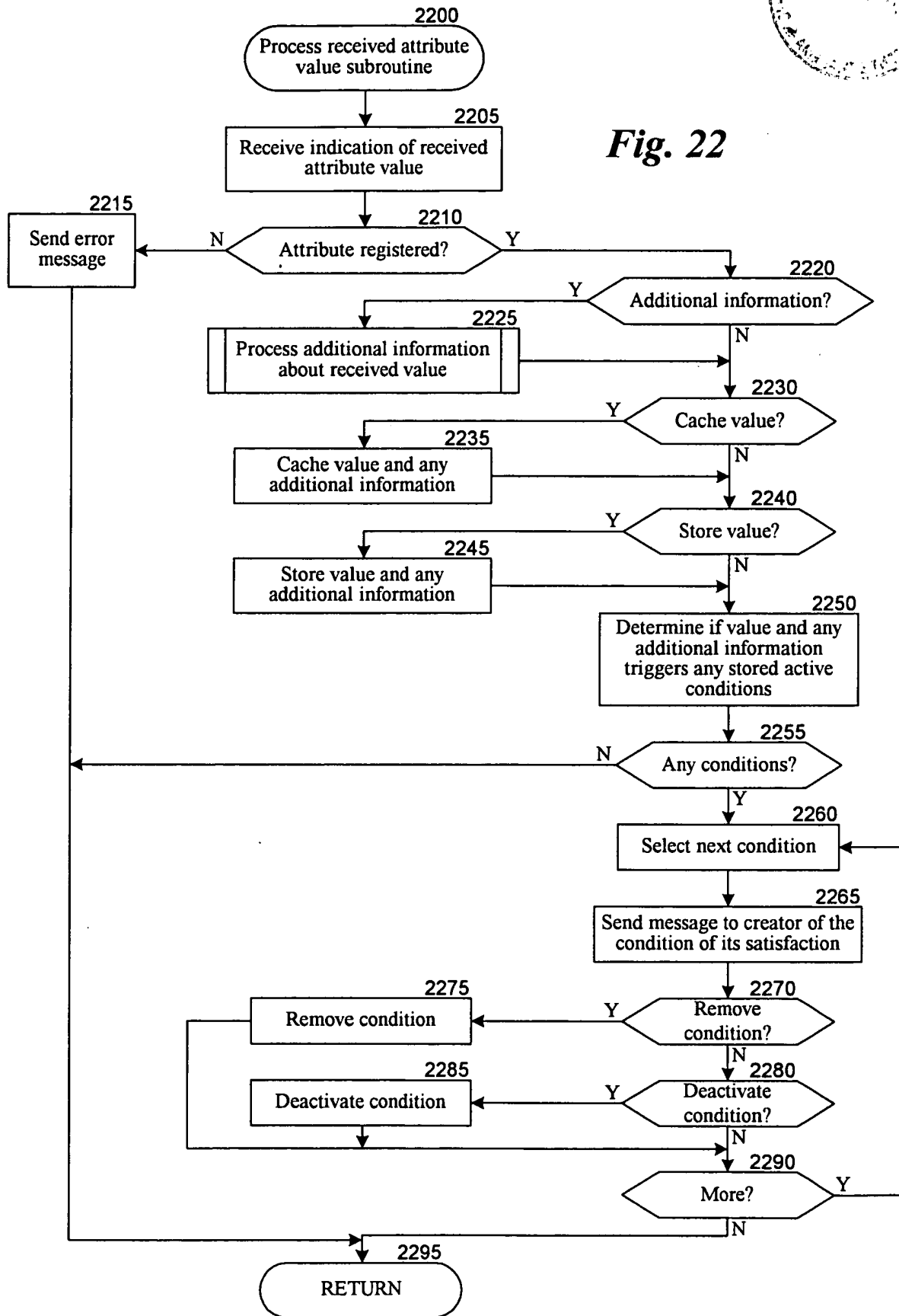


FIG. 20B-84684860

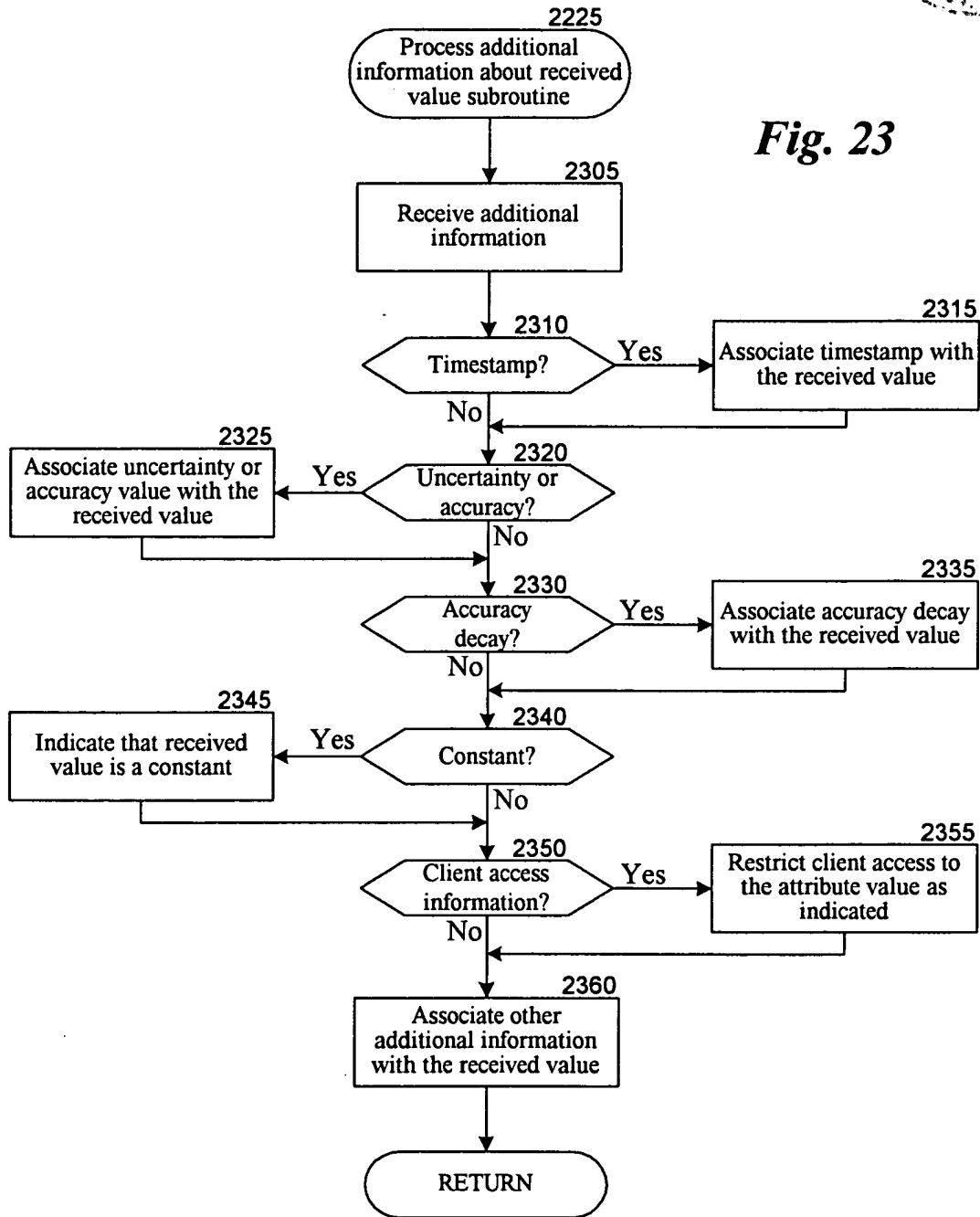
**Fig. 21**



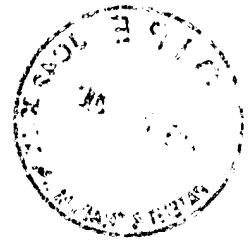




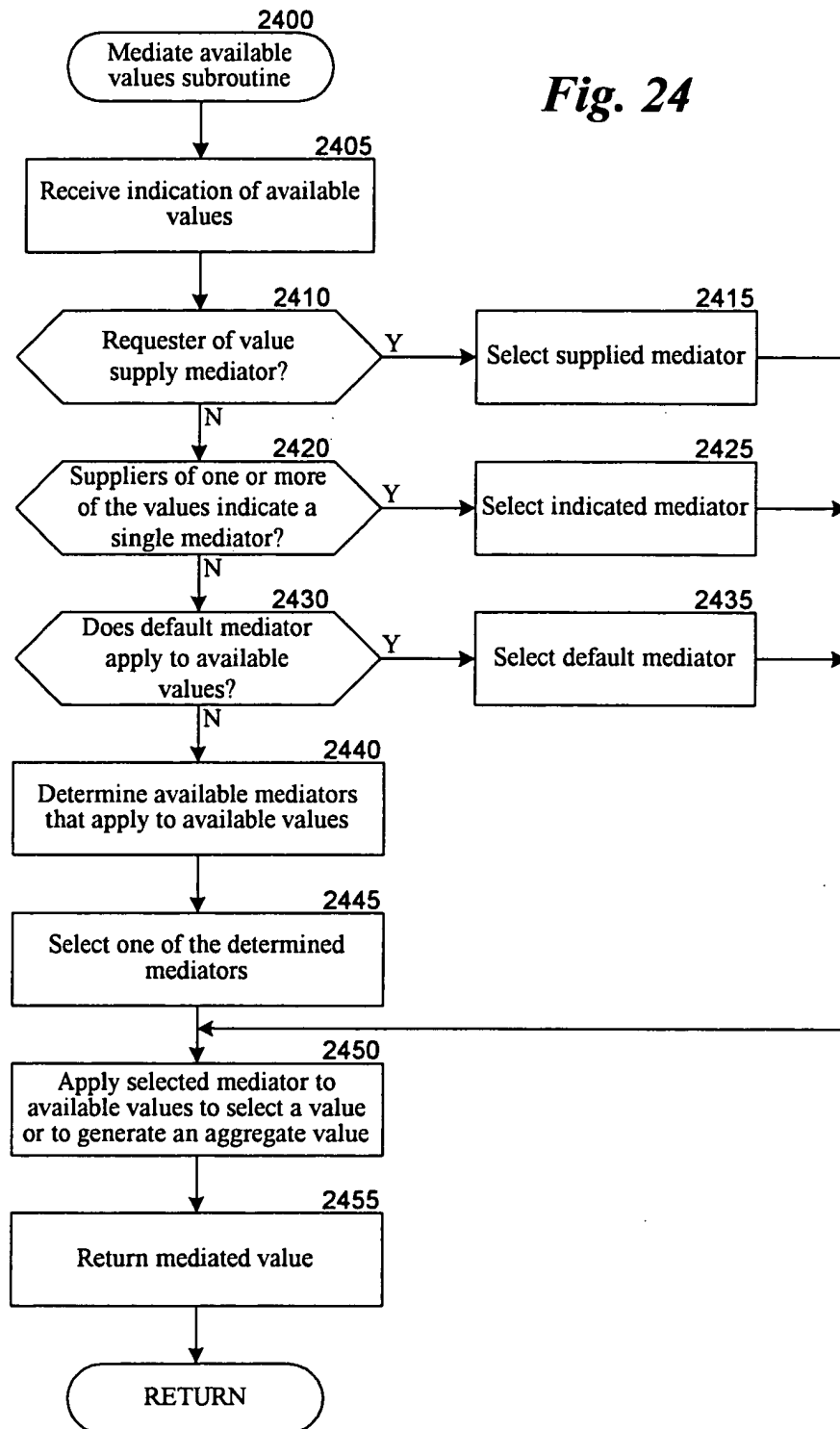
**Fig. 23**



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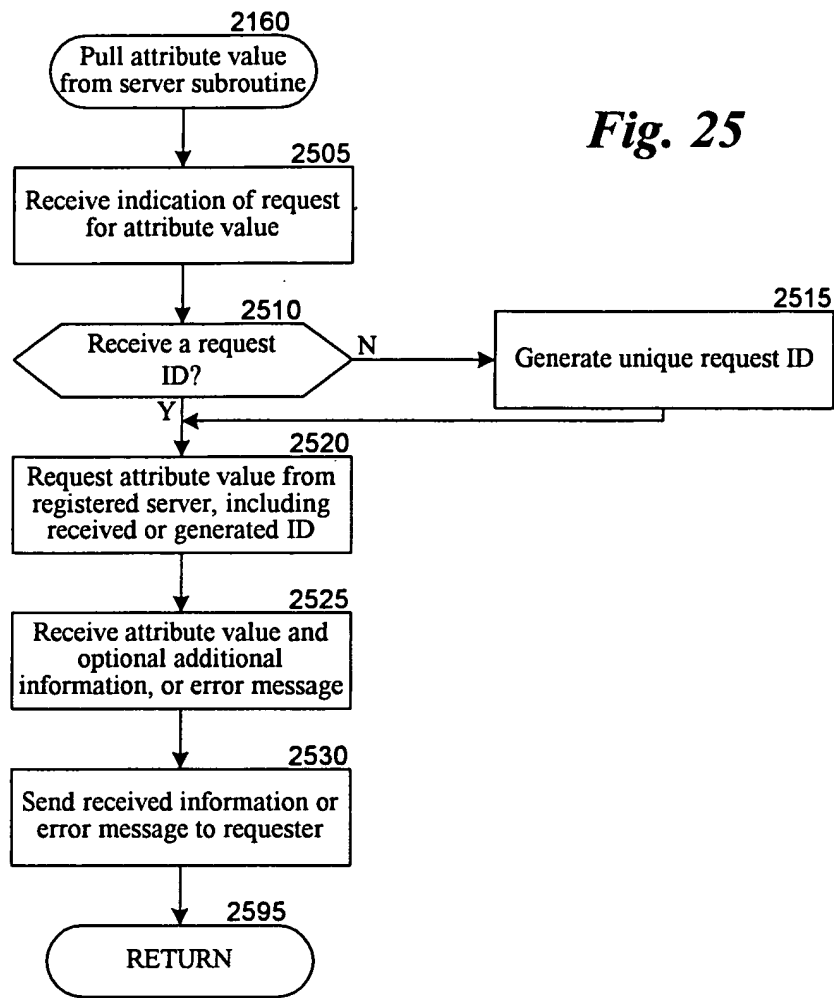


**Fig. 24**





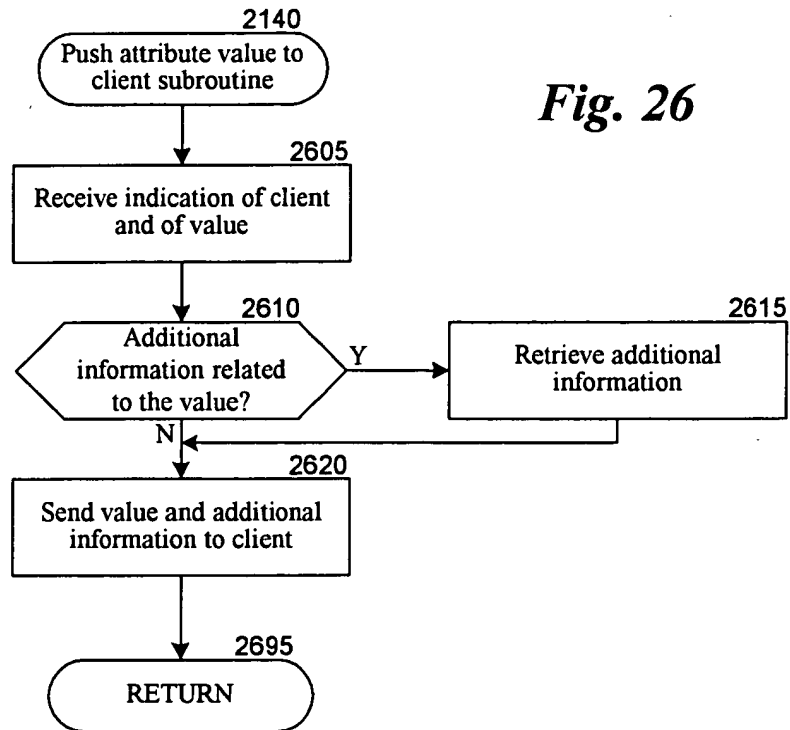
*Fig. 25*



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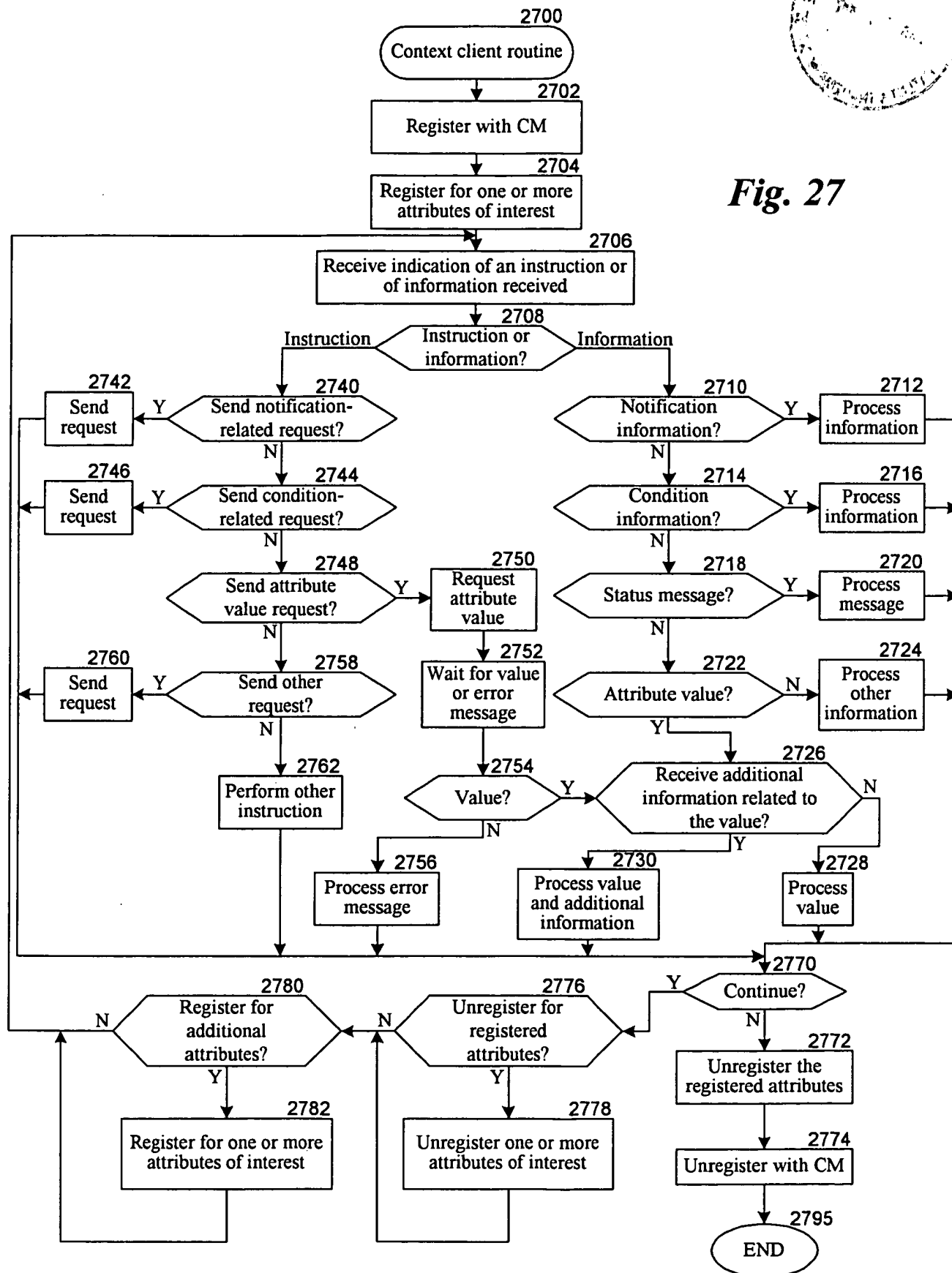
**Fig. 26**



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Fig. 27



FOI b6 b7C b7D



Fig. 28

